

Calculating and Allocating Capital for Credit Portfolios

Capital allocation for credit portfolios has two meanings. First, at portfolio level it means to determine capital as a buffer against an unexpected negative cash-flow resulting from credit losses. In this case, the allocation method can be specified by means of a risk measure. Its result is called total capital of the portfolio.

Second, at sub-portfolio or transaction level, capital allocation means breaking down the total capital of the portfolio to its sub-units. The resulting capital assignments are called risk contributions.

We introduce several current concepts for total capital and risk contributions in a general setting. In particular, we discuss briefly the main differences between regulatory and economic capital for credit institutions. Then we derive formulas and algorithms for the economic concepts in the special case of the CreditRisk+ methodology with individual independent loss given default distributions.